



## Materials Declaration Form

<b>IPC Form Type *</b>	<b>1752</b> Distribute	<b>Version</b>	<b>2</b>
<b>Sectionals *</b>	Material Info Manufacturing Info	<b>Subsectionals *</b>	A-D <i>* : Required Field</i>

Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2014-04-02</b>
<b>Contact Name *</b>	Refer to "Supplier Comment" section	<b>Contact Title</b>	Refer to "Supplier Comment" section
<b>Contact Phone *</b>	Refer to "Supplier Comment" section	<b>Contact Email *</b>	Refer to "Supplier Comment" section
<b>Authorized Representative *</b>	<b>Giuseppe Vitali Palma</b>	<b>Representative Title</b>	AMS & IPD Materials Declaration Champion
<b>Representative Phone *</b>	Refer to "Supplier Comment" section	<b>Representative Email *</b>	Refer to "Supplier Comment" section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/internet/com/support/online_tech_support.jsp">http://www.st.com/internet/com/support/online_tech_support.jsp</a>		

**Uncertainty Statement**

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**Legal Statement**

<b>Supplier Acceptance *</b>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
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**Legal Statement**

Supplier certifies that it gathered the provided information and such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form.

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
	DZWY*56VA8SL	A	ZS1A	2014-04-02
Amount	UoM	Unit type	ST ECOPACK Grade	
16.178	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	2.9X1.6X1.05	5	gull wing	
Comment	Package: SOT 23-5			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply)	false
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-16th December 2013				
Query				Response
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration						Mfr Item Name	DZWY*56VA8SL					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Silicon die	Other inorganic materials	0.567	mg	supplier	Silicon die	Silicon (Si)	7440-21-3		0.55	mg	970018	33997
Silicon die				supplier	Metallization	Aluminium (Al)	7429-90-5		0.002	mg	3527	124
Silicon die				supplier	Metallization	Titanium (Ti)	7440-32-6		0.001	mg	1764	62
Silicon die				supplier	Paasivation	Silicon Nitride (SiN)	68034-42-4		0.002	mg	3527	124
Silicon die				supplier	Paasivation	Silicon Oxide(SiO2)	7631-86-9		0.006	mg	10582	371
Silicon die				supplier	Paasivation	Gamma-butyrolactone	96-48-0		0.004	mg	7055	247
Silicon die				supplier	Paasivation	Polyhydroxyamide	55295-98-2		0.002	mg	3527	124
Lead frame	Copper & its alloys	7.224	mg	supplier	Alloy	Iron	7439-89-6		0.16	mg	22148	9890
Lead frame				supplier	Alloy	Copper	7440-50-8		6.95	mg	962071	429596
Lead frame				supplier	Alloy	Phophorus	7723-14-0		0.002	mg	277	124
Lead frame				supplier	Alloy	Zinc	7440-66-6		0.01	mg	1384	618
Lead frame				supplier	Alloy	Silver	7440-22-4		0.07	mg	9690	4327
Lead frame				supplier	Metallization	Nickel (Ni)	7440-02-0		0.028	mg	3876	1731
Lead frame				supplier	Metallization	Palladium (Pd)	7440-05-3		0.002	mg	277	124
Lead frame				supplier	Metallization	Gold (Au)	7440-57-5		0.002	mg	277	124
Die attach	Other Organic Materials	0.217	mg	supplier	Glue	Epoxyde Bisphenol A Resin	25068-38-6		0.061	mg	281106	3771
Die attach				supplier	Glue	Glycol ether ester	Proprietary		0.015	mg	69124	927
Die attach				supplier	Glue	Aromatic amine	Proprietary		0.004	mg	18433	247
Die attach				supplier	Glue	silica	60676-86-0		0.072	mg	331797	4450
Die attach				supplier	Glue	Aluminium oxide	1344-28-1		0.065	mg	299539	4018
Bonding wire	Other inorganic materials	0.15	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		0.15	mg	1000000	9272
Encapsulation	Other Organic Materials	8.02	mg	supplier	Molding compound	Silica fused	60676-86-0		6.91	mg	861596	427123
Encapsulation				supplier	Molding compound	phenolic resin	Proprietary		0.48	mg	59850	29670
Encapsulation				supplier	Molding compound	Epoxy resin	Proprietary		0.12	mg	14963	7417
Encapsulation				supplier	Molding compound	Biphenyl epoxy resin	85954-11-6		0.32	mg	39900	19780
Encapsulation				supplier	Molding compound	Carbon black	1333-86-4		0.02	mg	2494	1236
Encapsulation				supplier	Molding compound	Zinc hydroxide	20427-58-1		0.05	mg	8234	3091
Encapsulation				supplier	Molding compound	Magnesium hydroxide	1309-42-8		0.12	mg	14963	7417